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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,458	06/29/2006	Ralf Brederlow	I432.128.101/P31912	6035

25281 7590 04/01/2008

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EXAMINER	
MORTELL, JOHN F	

ART UNIT	PAPER NUMBER
2612	

MAIL DATE	DELIVERY MODE
04/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,458	BREDERLOW ET AL.	
	Examiner	Art Unit	
	JOHN F. MORTELL	4154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/30/2007; 1/10/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Figure 5, referenced in line 13 on page 10 and in line 24 on page 18 of the disclosure;

5a, 5b, 5c, 5d, and 5e, reference throughout the disclosure, appear in the drawings as 5A, 5B, 5C, 5D, and 5E; and

VDD and VSS, referenced in line 20 on page 22 of the disclosure.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

V1 and V2 in FIG 2; and

V1 and V2 in FIG 6.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

The paragraph beginning at line 27 on page 5 of the disclosure appears to be duplicative of the immediately preceding paragraph.

The paragraph beginning at line 10 on page 6 of the disclosure appears to be duplicative of the immediately preceding paragraph and of the paragraph immediately preceding that paragraph.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 12-15, 17-20, 22-26, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031).

Regarding (new) claim 12, Baude teaches RFID tag 58 in FIG. 10, which includes output inverter 76 that is disclosed as ring oscillator 33 in FIG. 6 ([0057]), comprising:

> an electronic component operable with an AC voltage ([0005], [0044], [0045]; FIG. 6; FIG. 10: 58), the electric component comprising:
>
> at least one input (FIG. 6: VIN);
>
> at least one output (FIG. 6: OUT);
>
> and a pair of functionally identical electronic sub-components (FIG. 6: 36A, 36G);
>
> wherein the at least one input of the electronic component is connected to a respective input of the two functionally identical electronic sub-components (FIG. 6: 36A);
>
> wherein the at least one output of the electronic component is connected to a respective output of the two functionally identical electronic sub-components (FIG. 6: 36G).

Baude does not teach an RFID tag:

> wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage.

Regarding (new) claim 12, Kaiser, in the same field of endeavor, teaches a transponder tag:

> wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of

> functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage (col. 6, lines 37-43; FIG. 4)

for the benefit of enabling a transponder tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate (col. 3, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the transponder tag:

> wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage,

as taught by Kaiser, with the RFID tag taught by Baude because it would enable the RFID tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate.

Regarding (new) claim 13, the combination above teaches the electronic component of (new) claim 12, and Baude further teaches an electronic component:

> further comprising a plurality of pairs of functionally identical electronic sub-components. (FIG. 6: 36A-36G)

Regarding (new) claim 14, the combination above teaches the electronic component of (new) claim 12, and Baude further teaches an electronic component:

> wherein at least one pair of functionally identical electronic sub-components comprises one of logic-gates, inverters and flip-flops. (FIG. 6: 35A, 36B)

Regarding (new) claim 15, the combination above teaches the electronic component of (new) claim 12, and Baude further teaches an electronic component:

> wherein the electronic component comprises a coil. (FIG. 10: 67)

Regarding (new) claim 17, the combination above teaches the electronic component of (new) claim 12, and Baude further teaches an electronic component:

> wherein the electronic sub-components of a pair of functionally identical electronic sub-components comprises a switch. (FIG. 6: 34A-34G, 35A-35G)

Regarding (new) claim 18, the combination above teaches the electronic component of (new) claim 18, and Baude further teaches an electronic component:

> wherein the electronic component is configured within an ID tag. ([0044], [0051], FIG. 10: 58, 76)

Regarding (new) claim 19, the combination above teaches the electronic component of (new) claim 18, and Baude further teaches an electronic component:

> wherein the ID tag comprises a memory for storing information. ([0052], FIG. 10: 70)

Regarding (new) claim 20, the combination above teaches the electronic component of (new) claim 18, and Baude further teaches an electronic component:

> wherein the ID tag comprises an encoder for coding information. ([0058], [0059]; Fig. 11: 70, 72)

Regarding (new) claim 22, Baude teaches:

> an electronic arrangement ([0005]) comprising:
>
> a read device (Fig. 10: 56);
>
> an ID tag with an electric component (FIG. 10: 58) comprising:

a first sub-component with an input and an output (FIG. 6: 36A);

a second sub-component with an input and an output (FIG. 6: 36B);

an AC signal received by the inputs of the first and second sub-components, the AC signal having a first half-wave and a second half-wave (FIG. 6: 12, 34A, 35A; FIG. 10: 66);

wherein the ID tag and read device are configured to communicate with each other without contact ([0054], [0060]; FIG. 10: 56, 59, 64, 67; FIG. 11: 59, 67)

Regarding (new) claim 22, the Baude does not teach:

means for providing an output from only the first sub-component during the first half-wave; or

means for providing an output from only the second sub-component during the second half-wave;

Regarding (new) claim 22, Kaiser, in the same field of endeavor, teaches a transponder tag comprising:

means for providing an output from only the first sub-component during the first half-wave (col. 6, lines 37-43; FIG. 4); and

means for providing an output from only the second sub-component during the second half-wave (col. 6, lines 37-43; FIG. 4)

for the benefit of enabling a transponder tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate (col. 3, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the transponder tag:

means for providing an output from only the first sub-component during the first half-wave; and

> means for providing an output from only the second sub-component during the second half-wave,

as taught by Kaiser, with the RFID tag taught by Baude because it would enable the RFID tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate.

Regarding (new) claim 23, the combination above teaches the electronic arrangement of (new) claim 22, and Baude further teaches an electronic arrangement:

> wherein the first and second sub-components are functionally substantially similar. (FIG. 6: 36A, 36B)

Regarding (new) claim 24, the combination above teaches the electronic arrangement of (new) claim 23, and Baude further teaches an electronic arrangement:

> wherein the electronic component further comprises a plurality of pairs of functionally identical electronic sub-components. (FIG. 6: 36A-36G)

Regarding (new) claim 25, the combination above teaches the electronic arrangement of (new) claim 23, and Baude further teaches an electronic arrangement:

> wherein at least one pair of functionally identical electronic sub-components comprises one of logic-gates, inverters and flip-flops. (FIG. 6: 36A, 36B)

Regarding (new) claim 26, the combination above teaches the electronic arrangement of (new) claim 23, and Baude further teaches an electronic arrangement:

> wherein the electronic component comprises a coil. (FIG. 10: 67)

Regarding (new) claim 28, the combination above teaches the electronic arrangement of (new) claim 23, and Baude further teaches an electronic arrangement:

> wherein the electronic sub-component comprises a switch. (FIG. 6: 34A)

Regarding (new) claim 29, the combination above teaches the electronic arrangement of (new) claim 23, and Baude further teaches an electronic arrangement:

> wherein the ID tag comprises a memory for storing information. ([0052]; FIG. 6: 70)

Regarding (new) claim 30, the combination above teaches the electronic arrangement of (new) claim 29, and Baude further teaches an electronic arrangement:

> wherein the ID tag comprises an encoder for coding information. ([0058], [0059]; Fig. 11: 70, 72)

6. (New) claim 16 and (new) claim 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031) and further in view of Seal (US 6,693,511 B1).

Regarding (new) claim 16, the above combination of Baude and Kaiser teaches the electronic component of claim 12 but does not teach an electronic component:

> further comprising a voltage limiter, which limits the AC voltage lying across an electronic sub-component of the pair of functionally identical electronic sub-components.

Regarding (new) claim 16, Seal, in the same field of endeavor, teaches radio frequency identification (RFID) tags comprising a pair of diodes acting as a symmetrical diode limiter for the benefit of stopping voltage overload from the stronger input level of a signal from a transponder. (col. 13, lines 41-46; FIG 17: 1703, 1705)

It would have been obvious to one of ordinary skill in the are at the time of the invention to combine the pair of diodes acting as a symmetrical diode limiter, as taught by Seal, with the electronic component of the above combination because it would

enable the device to stop voltage overload from the stronger input level of a signal from a transponder.

Regarding (new) claim 27, the above combination of Baude and Kaiser teaches the electronic arrangement of (new) claim 23 but does not teach an electronic arrangement:

> wherein the electronic component further comprises a voltage limiter, which limits the AC voltage lying across an electronic sub-component of the pair of functionally identical electronic sub-components.

Regarding (new) claim 27, Seal, in the same field of endeavor, teaches radio frequency identification (RFID) tags comprising a pair of diodes acting as a symmetrical diode limiter for the benefit of stopping voltage overload from the stronger input level of a signal from a transponder. (col. 13, lines 41-46; FIG 17: 1703, 1705)

It would have been obvious to one of ordinary skill in the are at the time of the invention to combine the pair of diodes acting as a symmetrical diode limiter, as taught by Seal, with the electronic arrangement of the above combination because it would enable the electronic arrangement to stop voltage overload from the stronger input level of a signal from a transponder.

7. (New) claim 21 and (new) claim 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031) and further in view of Bayron et al. (US 5,769,051).

Regarding (new) claim 21, the above combination of Baude and Kaiser teaches the electronic component of (new) claim 20, and Baude further teaches an electronic component:

> wherein the encoder is configured such that it can be used for pulse-coding. ([0057], [0060]; FIG. 11: 72, 76)

Baude does not teach an electronic component wherein the encoder is configured such that it can be used for time-coding.

Regarding (new) claim 21, Bayron, in the same field of endeavor, teaches a passive transponder:

> wherein the encoder is configured such that it can be used for time-coding (col. 6, lines 57-64; FIG. 7: 96)

for the benefit of enabling a keychain unit to operate as a passive transponder for interfacing with an engine controller. (col. 2, lines 33-34, 64-65)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the passive transponder:

> wherein the encoder is configured such that it can be used for time-coding,

as taught by Bayron, with the electronic component of the combination above because it would enable the electronic component to operate as a passive transponder for interfacing with an engine controller.

Regarding (new) claim 31, the above combination of Baude and Kaiser teaches the electronic arrangement of (new) claim 30, and Baude further teaches an electronic arrangement:

> wherein the encoder is configured such that it can be used for pulse-coding. ([0057], [0060]; FIG. 11: 72, 76)

Baude does not teach an electronic component wherein the encoder is configured such that it can be used for time-coding.

Regarding (new) claim 31, Bayron, in the same field of endeavor, teaches a passive transponder:

> wherein the encoder is configured such that it can be used for time-coding (col. 6, lines 57-64; FIG. 7: 96)

for the benefit of enabling a keychain unit to operate as a passive transponder for interfacing with an engine controller. (col. 2, lines 33-34, 64-65)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the passive transponder:

> wherein the encoder is configured such that it can be used for time-coding,

as taught by Bayron, with the electronic component of the combination above because it would enable the electronic component to operate as a passive transponder for interfacing with an engine controller.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

> Suzuki (US 5,701,093) teaches an adiabatic MIS logic and power supplying method and apparatus.
>
> De (US 5,986,476) teaches a method and apparatus for implementing a dynamic adiabatic logic family.
> Enguent (US 6,329,808 B1) teaches a method and system for the detection, by inductive coupling, of a load modulation signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN F. MORTELL whose telephone number is

(571)270-1873. The examiner can normally be reached on M-F: 7:30 a.m.-5:00 p.m. Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JM/

/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4154